

REMARKS

Claims 1-6, 14-15 and 21-23 are pending. Claims 1-6, 14-15 and 21-23 were rejected as an obviousness-type double patenting. Claims 1-6, 14-15 and 21-23 were rejected under 35 U.S.C. § 112, second paragraph. Claims 1-4 and 14-15 were rejected under 35 U.S.C. § 102(b). Claims 21-23 were rejected under 35 U.S.C. § 102(b)/103(a). Claims 5-6 were rejected under 35 U.S.C. § 103(a).

Double Patenting Rejection

Claims 1-6, 14-15 and 21-23 were rejected as an obviousness-type double patenting over claims 1-6 and 8-9 of commonly owned U.S. Patent Number 6,980,709 issued to Carlson et al. on December 27, 2005.

Applicant has elected to provide a terminal disclaimer.

Rejection Under 35 U.S.C. § 112

Claims 1-6, 14-15 and 21-23 were rejected under 35 U.S.C. §112, second paragraph as failing to comply with the enablement requirement.

Applicant respectfully traverses this ground of rejection.

Applicant's specification provides examples of what is comprised by the polymeric materials on page 5, lines 24-25 to page 6, line 1 and page 8, line 12. Thus, applicant asserts that those of ordinary skill in the art would be able to select polymeric materials and coupling agents suitable for use in any particular implementation of applicant's claimed invention.

Claims 1-6 and 14-15 were rejected under 35 U.S.C. §112, second paragraph as failing to comply with the enablement requirement, because the Office Action states that the claims are overly broad.

Applicant has responded by amending claim 1 to narrow the claims.

In view of the foregoing, applicant submits that claim 1 is allowable under 35 U.S.C. § 112, second paragraph. Since claim 2-6 and 14-15 depend from allowable claim 1, these claims are also allowable under 35 U.S.C. § 112, second paragraph.

Rejections Under 35 U.S.C. § 102(b)

Claims 1-3 and 15 were rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent Number 5,745,627 issued to Arroyo et Al. on April 28, 1998.

Claims 1-3 and 15 were rejected under 35 U.S.C. §102(b) as being anticipated by WO99/36829 issued to SUN Microsystems Inc.

Claims 1-4 and 15 were rejected under 35 U.S.C. §102(b) as being anticipated by EP 660082 issued to Andrew A. G.

Claims 1-3 and 14-15 were rejected under 35 U.S.C. §102(b) as being anticipated by EO 752603 issued to W. L. Gore and Associates.

Applicant has avoided these grounds of rejection for the following reasons.

First, applicant's claim 1, as amended, now recites,

"introducing a plurality of voids into a polymeric material, wherein the introducing of the plurality of voids reduces a density of the polymeric material and promotes a decrease in a bulk modulus of the polymeric material"

The cited references do not teach this limitation. Instead, Arroyo discloses a fiber optic core member consisting of a central conductor surrounded by and encased in a cylindrical dielectric member of suitable material, such as polyester foam. Surrounding the assembly of the core member is a jacket of suitable insulating material, such as polyethylene. Optical fibers within the jacket but exterior to a metallic member encasing the central conductor creates voids through which water may flow. The voids contain filamentary water-blocking material that has the property of swelling to several times its original size without being dissolved in water, when exposed to water or other moisture, and thereby blocking any water passages created by the voids, as stated in column 2, lines 63-67 to column 3, lines 1-7. However, contrary to applicant's claim 1, Arroyo does not disclose "introducing of the plurality of voids reduces a density of the polymeric material and promotes a decrease in a bulk modulus of the polymeric material", as recited in applicant's claim 1.

Second, WO99/36829 teaches a buffer layer of plastic form that surrounds a fiber optic cable core and provides mechanical thermal insulation. However, contrary to

applicant's claim 1, WO99/36829 does not disclose that the buffer layer of plastic form is a "polymeric material" as recited in applicant's claim 1. Also, similar to Arroyo, WO99/36829 does not disclose "introducing of the plurality of voids reduces a density of the polymeric material and promotes a decrease in a bulk modulus of the polymeric material", as recited in applicant's claim 1.

Third, EP 660082 discloses a sensing coil of a fiber optic gyroscope that is submerged in a gel. The fiber has a polymeric buffer coating on it, as stated in column 6, lines 28-31. However, contrary to applicant's claim 1, EP 660082 does not disclose "introducing of the plurality of voids reduces a density of the polymeric material and promotes a decrease in a bulk modulus of the polymeric material", as recited in applicant's claim 1. This is because EP 660082 teaches the use of Young's modulus of the gel, as stated in column 7, lines 10-12, rather than a decrease in a bulk modulus of the polymeric material, as required by applicant's claim 1.

Fourth, EO 752603 discloses a light transmitting fiber core and a buffer composed of a closed cell porous polymer mater that surrounds the light transmitting fiber core. EO 752603 teaches that the buffering protects the optical fiber from severe stresses, as stated on page 2, lines 30-32. However, contrary to applicant's claim 1, EO 752603 does not disclose "introducing of the plurality of voids reduces a density of the polymeric material and promotes a decrease in a bulk modulus of the polymeric material", as recited in applicant's claim 1.

Thus, the clear teaching of Arroyo, WO99/36829, EP 660082 and EO 752603 is that introducing of the plurality of voids does not reduce a density of the polymeric material and promote a decrease in a bulk modulus of the polymeric material.

In view of the foregoing, applicant submits that Arroyo, WO99/36829, EP 660082 and EO 752603 do not describe each and every element of claim 1, and therefore claim 1 is not anticipated by Arroyo, WO99/36829, EP 660082 and EO 752603. Since claims 2-4 and 14-15 depend from allowable claim 1, these claims are also allowable over Arroyo, WO99/36829, EP 660082 and EO 752603.

Rejections Under 35 U.S.C. § 102(b)/103(a) and 35 U.S.C. § 103(a)

Claims 21-23 were rejected under 35 U.S.C. §102(b) as being anticipated by, or, in the alternative under 35 U.S.C. §103(a) as being obvious over EP 660082 issued to Andrew A. G.

Claims 5-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over EP 660082 issued to Andrew A. G. in combination with U. S. Patent Number 5,706,175 issued to Takei on January 6, 1998.

Applicant respectfully traverses these grounds of rejection.

Claims 5-6 and 21-23 depend from independent claim 1. As noted hereinabove, EP 660082 does not teach or suggest the "introducing a plurality of voids into a polymeric material, wherein the introducing of the plurality of voids reduces a density of the polymeric material and promotes a decrease in a bulk modulus of the polymeric material ... ", as recited in applicant's independent claim 1. Takei does not teach or suggest the elements either. Thus, claims 21-23 are allowable over EP 660082 under 35 U.S.C. § 102(b)/103(a) and claims 5-6 are allowable over the proposed combination of EP 660082 and Takei under 35 U.S.C. § 103(a).

Claim Amendments

Claims 4-5 and 21-23 were amended to add the term "and". Also, claims 14 and 21 were amended to add the term "the one or more sensor fibers having". No new matter was added.

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Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

In view of the above amendments and remarks, allowance of all claims pending is respectfully requested. If a telephone conference would be of assistance in advancing the prosecution of this application, the Examiner is invited to call applicant's attorney.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Carmen B. Patti', with a stylized flourish at the end.

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